### (19) World Intellectual Property Organization

International Bureau





## (43) International Publication Date 3 March 2005 (03.03.2005)

### **PCT**

# (10) International Publication Number WO 2005/019863 A2

(51) International Patent Classification<sup>7</sup>:

**G01V** 

(21) International Application Number:

PCT/IL2004/000763

(22) International Filing Date: 19 August 2004 (19.08.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

157520

21 August 2003 (21.08.2003) 1

(71) Applicant and

(72) Inventor: GATT, Rafi [IL/IL]; P.O.Box 155, 20175 Rakefet (IL).

(74) Agent: FRIEDMAN, Mark; 7 Jabotinsky St., 52520 Ramat Gan (IL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

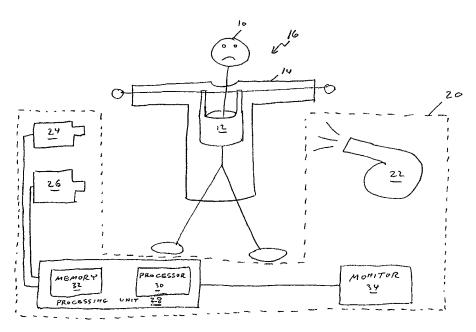
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF DETECTING CONCEALED OBJECTS



(57) Abstract: An object concealed in a body is detected by transiently heating or cooling at least part of the body surface, imaging that part of the surface in the mid- or far-infrared, and seeking the concealed object in the image(s). Alternatively, the body is imaged as the temperature of its environment fluctuates naturally. Preferably, multiple infrared images are acquired and are processed to provide a measure of the body's thermal diffusivity, the object then being sought according to that measure of thermal diffusivity. Most preferably, the heated/cooled part of the surface is imaged in the visible or near-infrared band too, and the two sets of images are processed together to provide the measure of the body's thermal diffusivity.

